

Remarks

Reconsideration is requested in view of the above amendment and the following remarks. Claims 1-3 are amended. Claims 1-9 are pending.

Claims 1-3 have been amended to return the claims to their original, as-filed form.

Applicants would like to thank the Examiner for the telephone interview conducted on October 21, 2003 with Applicants' representative, James A. Larson. During the interview, claims 1-3 and the Hirata et al. patent (US 5,485,308) were discussed, with Applicants explaining why the claims are patentable over Hirata. In addition, Applicants discussed returning the claims to their original form. As indicated by the Interview Summary dated October 24, 2003, the amendments presented herein will overcome the objection to the drawings and the 112, first paragraph rejection, and the claims appear to be patentable over Hirata.

Drawings and 35 USC 112 rejection

The Examiner has objected to the drawings for allegedly not illustrating lenticular lenses that are arranged so that the lengthwise axes thereof are directed in a vertical direction.

Claims 1-9 are rejected under 35 USC 112, first paragraph, for containing new matter. In particular, the rejection asserts that there is insufficient disclosure in the specification and drawings for reciting lenticular lenses that are arranged so that the lengthwise axes thereof are directed in a vertical direction.

Applicants respectfully traverse.

In order to expedite prosecution and obtain allowance of the claims, claims 1-3 have been amended to remove the language in question. Applicants disagree that the language was new matter, and believe that it is inherent from the disclosure that the lenticular lenses are arranged so that the lengthwise axes thereof are directed in a vertical direction.

Withdrawal of the rejection is requested.

35 USC 102 and 35 USC 103 rejections

Claims 2-9 are rejected under 35 USC 102(b) as being anticipated by Hirata et al. (US Patent 5,485,308). Applicants respectfully traverse this rejection, and reconsideration is requested.

In addition, claims 1 and 4-9 are rejected under 35 USC 103(a) as being unpatentable over Hirata et al. (US Patent 5,485,308) in view of Dubin et al. (US Patent 6,278,546).

Applicants respectfully traverse this rejection, and reconsideration is requested.

Claims 2-9

With respect to claims 2-9, claims 2 and 3 recite, among other features, a color-shading eliminating means having, on its light incident surface, light incident side lenticular lenses for converging incident light from the collimating means in a horizontal plane. In addition, claims 2 and 3 each recite three image projecting sections being arrayed in one horizontal plane.

Hirata et al. does not disclose a display apparatus that includes this combination of features. Hirata et al. discloses a rear projection type display apparatus that includes a rear projection screen 1 comprising a Fresnel lens sheet 2, a first lenticular lens sheet 3 and a second lenticular lens sheet 4. In one embodiment, the lenticular lens sheet 3 includes lenticular lenses on the incident and exit sides (Fig. 33). In the embodiments disclosed by Hirata et al., the lenticular lenses on the lens sheet 3 are arranged horizontally to diffuse light rays in the vertical direction (col. 7, lines 26-27 col. 14, lines 19-24; col. 23, lines 49-59).

The light incident side lenticular lenses of Hirata et al. on the sheet 3 are horizontal, so they converge light in a vertical plane, and not in a horizontal plane as claimed. The office action refers to column 7, lines 14-33 of Hirata et al. as teaching lenticular lenses arranged vertically on the sheet 3. Applicants respectfully submit that this passage in Hirata et al. has been misconstrued.

Column 7, lines 16-19 states "the first lenticular lens sheet...a plurality of aspherical horizontally elongated lenticular lenses having a longitudinal direction corresponding to the screen horizontal direction are arranged in the screen vertical direction". This arrangement is clearly shown in Figures 13 and 33 of Hirata et al., where the longitudinal axes of the lenticular lenses are arranged horizontally, but the lenses also take-up the vertical extent of the sheet 3 (i.e. there are lenses on the entrance surface 31 from the top of the surface 31 to the bottom of the surface 31). This arrangement is also clearly described at column 12, lines 42-47 of Hirata et al., where the horizontal lenticular lenses of the sheet 3 are said to be arranged in a continuous vertical arrangement.

There is no disclosure in Hirata et al. of the lenticular lenses of the lens sheet 3, which the rejection characterizes as a color-shading eliminating means, as being arranged in a vertical direction.

During the above-referenced telephone interview, the Examiner suggested that rotation of Figure 33 of Hirata et al. by 90 degrees would result in vertical lenses. Applicants respectfully traverse. First, there is no suggestion in Hirata et al. to rotate the arrangement in Figure 33. However, even if Figure 33 is rotated as suggested by the Examiner, the invention in claims 2 and 3 does not result. Claims 2 and 3 recite three image projecting sections being arrayed in one horizontal plane. If Figure 33 of Hirata et al. were rotated 90 degrees, the lenses on the first sheet 3 would then be vertical to converge light in a horizontal plane, while the image projecting sections would be arrayed in a vertical plane.

As a result, Hirata et al. does not teach a color shading eliminating means having three image projecting sections being arrayed in one horizontal plane and light incident side lenticular lenses that are arranged for converging incident light from the collimating means in a horizontal plane.

Therefore, Hirata et al. does not anticipate or render obvious claims 2 or 3, or any claims depending therefrom.

Claims 1 and 4-9

With respect to claims 1 and 4-9, claim 1 recites, among other features, a color-shading eliminating means having, on its light incident surface, light incident side lenticular lenses for converging incident light from the collimating means in a horizontal plane, and three image projecting sections being arrayed in one horizontal plane.

Hirata et al. is discussed above with respect to claims 2 and 3. As explained above, Hirata et al. does not teach the combination of a color shading eliminating means having three image projecting sections being arrayed in one horizontal plane and light incident side lenticular lenses that are arranged for converging incident light from the collimating means in a horizontal plane.

Dubin et al. discloses a display screen for a projection display. However, Dubin et al. does not remedy the deficiencies of Hirata et al. Dubin et al. does not teach the combination of a color shading eliminating means having three image projecting sections being arrayed in one

horizontal plane and light incident side lenticular lenses that are arranged for converging incident light from the collimating means in a horizontal plane.

Thus, even if combined, Hirata et al. and Dubin et al. do not teach or suggest the invention recited in claim 1.

For at least these reasons, claim 1 and claims 4-9 depending therefrom, are patentable over Hirata et al. and Dubin et al. Withdrawal of the rejection is requested.

Conclusion

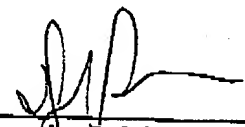
Applicants believe that the application is in condition for allowance. Favorable consideration is respectfully requested. If any further questions arise, the Examiner is invited to contact Applicants' representative at the number listed below.

Respectfully Submitted,

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Dated: November 7, 2003

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